

HIGH RESOLUTION DOME CAMERA

OPERATION MANUAL



Thank you for choosing our high quality camera.

Before attempting to connect or operate, please read and follow these instructions.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than
that contained in the operating instructions unless you are qualified to do so.

Use Class 2 Power Supply Only

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1. CAUTIONS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / tv technician for help.

Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAUTION

1. A regulated DC12V 1A power supply is recommended for use with this camera for the best picture and the most stable operation.
An unregulated power supply can cause damage to the camera.
When unregulated power supply is applied, product warranty will be out of subject.
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level.
If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal components. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**
6. Do not expose the camera to rain or other types of liquid.
7. The apparatus must be connected to a mains socket-outlet with a protective earthing connection.

1. CAUTIONS



WEEE (Waste Electrical & Electronic Equipment)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



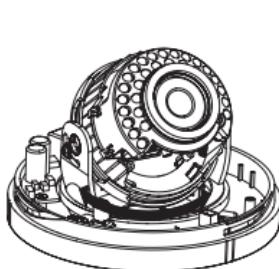
This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

2. IMPORTANT SAFETY INSTRUCTIONS

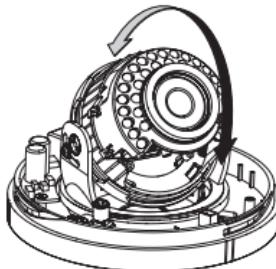
- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

3. FEATURES

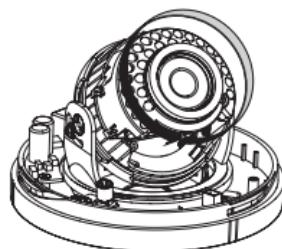
- 1/3" 960H SONY EXview HAD CCD II
- High Resolution of 700TV Lines
- OSD Function
- Multi Language
(ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN / PORTUGUESE / SPANISH / CHINESE)
- 2DNR
- Privacy Zone
- Motion Detect
- DC12V / AC24V Dual Voltage
- **ATR(Adaptive Tone-curve Reproduction / Digital WDR)**
The function provides gradation compensation to improve the contrast of subjects both low-luminance areas and high luminance areas exist in the same picture
- 3-Axis Gimbal



Pan Rotation



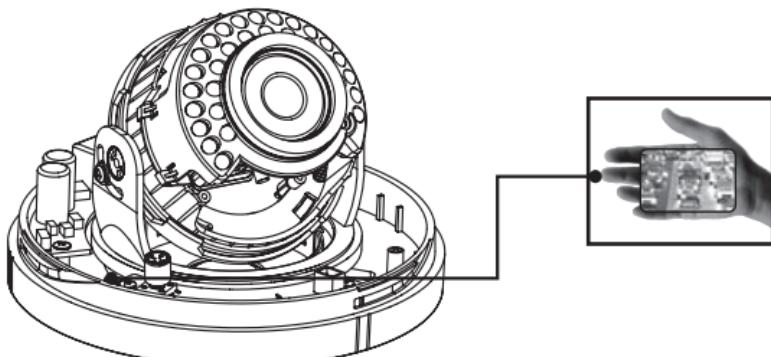
Tilt Rotation



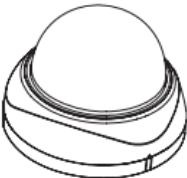
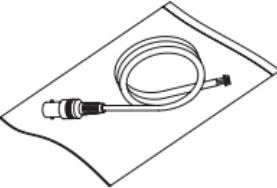
Horizontal Rotation

- **Service Video connector**

The Service Video Connector also provides the installer with an easy way of configuring the camera.

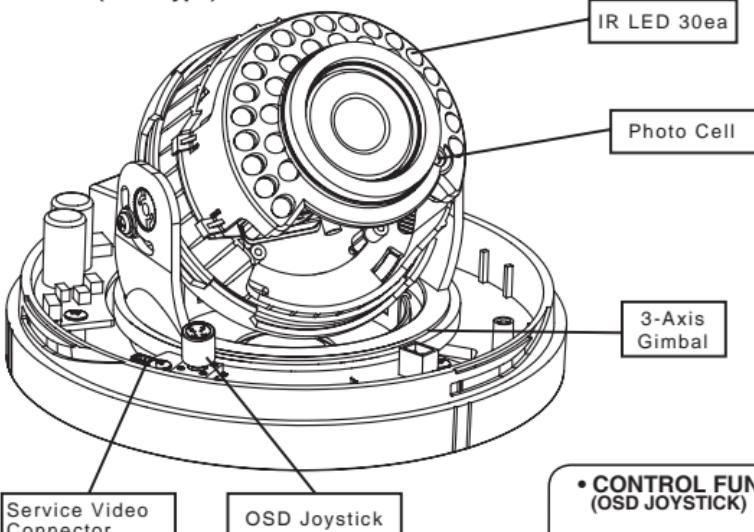


4. EQUIPMENT AND ACCESSORIES

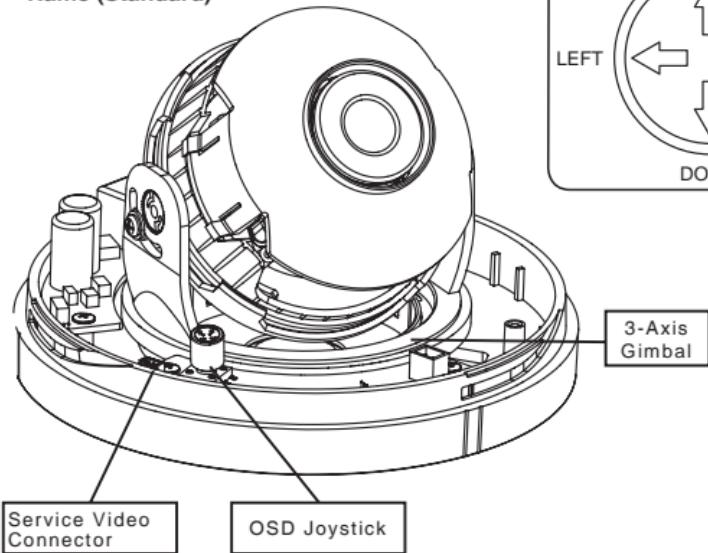
1	DOME CAMERA	
2	VIDEO OUTPUT TEST CABLE	
3	OPERATION MANUAL	
4	SCREW - 3ea	
5	TEMPLATE	

5. OVERVIEW AND FUNCTION

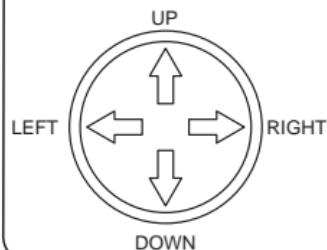
- Name (LED Type)



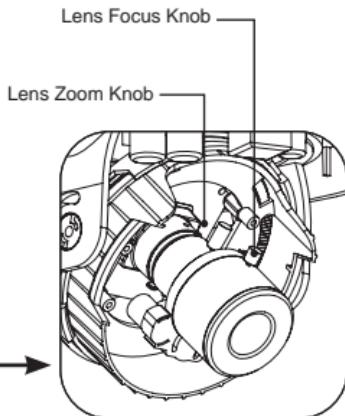
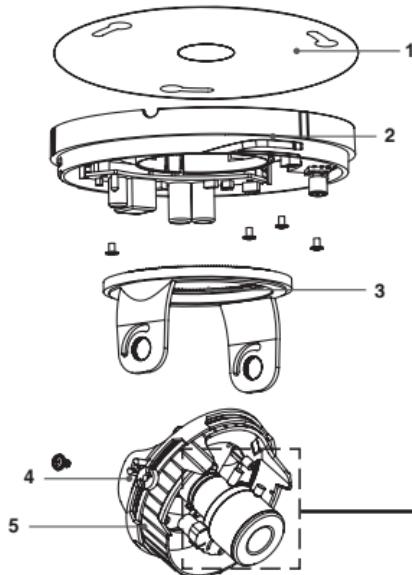
- Name (Standard)



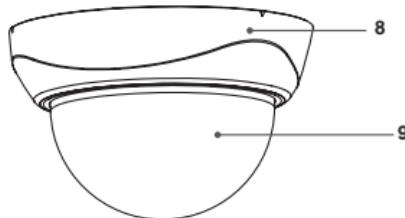
- CONTROL FUNCTION (OSD JOYSTICK)



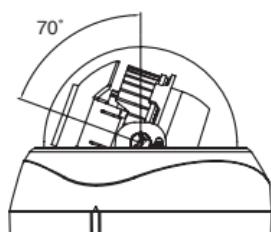
6. INSTALLATION



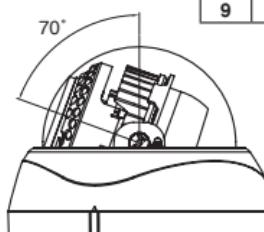
! Separate LED Cover (Sunshield Cover) and adjust LENS ZOOM / FOCUS KNOB
After setting the LENS, assemble the LED Cover (Sunshield Cover).



NO	PART NAME
1	Mount Guide
2	Housing Bottom
3	Holder Panning
4	Holder Tilt
5	Holder Rotate
6	Sunshield Cover
7	Led Cover
8	Housing Top
9	Dome Cover



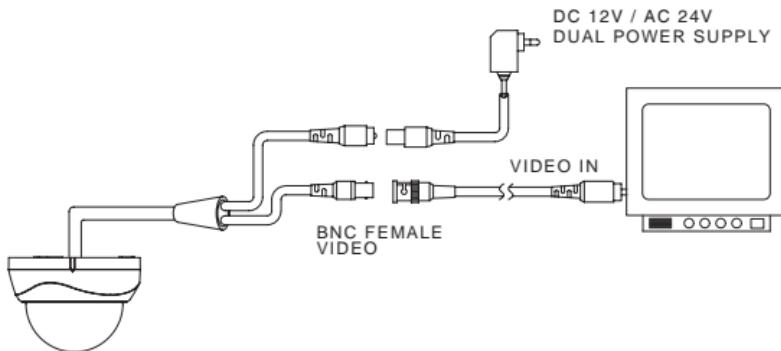
Standard Type



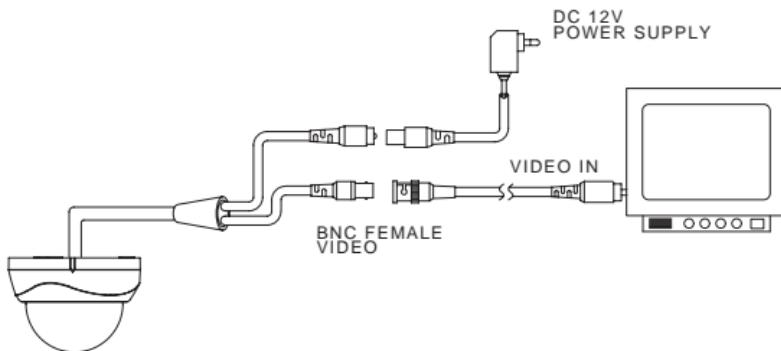
LED Type

7. CONNECTION

- DUAL(DC 12V/AC24V)



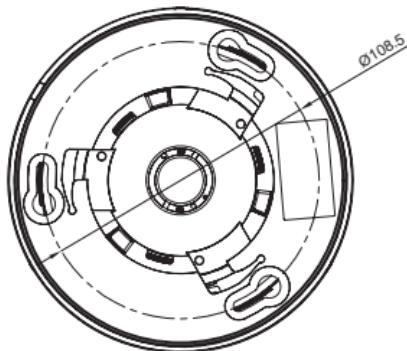
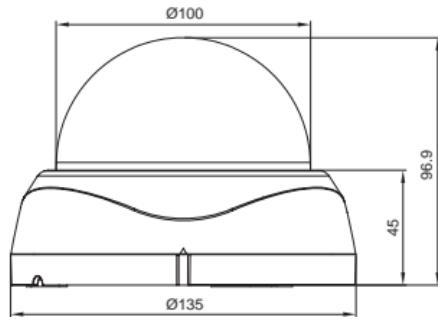
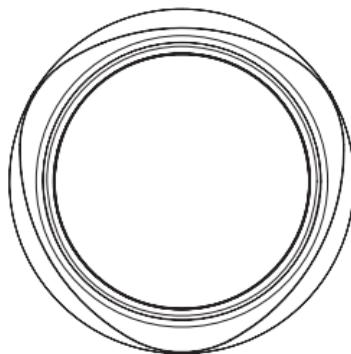
- DC 12V



When you install the camera, please glue up the end of cable to keep it stable in order to protect the camera from the humidity problems.

8. DIMENSIONS

Unit : mm



9. SPECIFICATION

Signal Format	NTSC	PAL
Image Device	1/3" 960H SONY EXview HAD CCD II	
Scanning System	2:1 Interlace	
H.Resolution	700TV Lines	
Scanning Frequency	H:15.734KHz, V:59.94Hz	H:15.625KHz, V:50Hz
Total Pixels	1020(H) X 508(V)	1020(H) X 596(V)
Effective Pixels	976(H) X 494(V)	976(H) X 582(V)
Electronic Shutter Speed	1/60 sec	1/50 sec
S/N Ratio	More than 50dB(AGC Off)	
Gamma	r=0.45	
Min. Illumination	COLOR : 0.05Lux/F1.2, BW : 0.02 Lux/F1.2	
Sync System	Internal	
Video Output	1.0 Vp-p Composite(75Ω)	
OSD	Built in (Inner Key / Joystick)	
BLC	OFF / BLC / HLC	
White Balance	ATW / PUSH / USER1 / USER2 / ANTI CR / MANUAL / PUSH-LOCK	
2DNR	OFF / ON (Level adjustable)	
ATR	OFF / ON (Level adjustable)	
Function	MIRROR / BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	
Privacy Masking	4 Zones	
Motion Detection	4 Zones	
Day & Night	AUTO	
Language	ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN / PORTUGUESE / SPANISH / CHINESE	
Power Consumption	DC12V Dual	DC 12V, (±10%) Max.120mA DC 12V, (±10%) Max.150mA / AC 24V, (±10%) Max. 2.3W
Operating Temperature		-10°C ~ +50°C
Storage Temperature		-20°C ~ +60°C
Operating Humidity		Less than 80%
Options		Dual Power
Weight		Approx. 343g
Dimension(mm)		136.4(Φ) x 95.3(mm)

LED TYPE

Power Consumption	DC12V Dual	DC 12V, (±10%) Max. 320mA DC 12V, (±10%) Max 390mA / AC 24V, (±10%) Max. 4.8W
Min. Illumination		0 Lux (IR LED ON)
IR LED		850nm, 30ea
IR Beam Range		Up to 30M
IR LED Operation		On : 1 Lux, Off : 3 Lux

Specifications and designs are subject to change for improving the functionality of this product without notice.

10. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
LENS	MANUAL			
	AUTO	TYPE	DC	
		MODE	AUTO,OPEN,CLOSE	
		SPEED	(000 ~ 255)	
		RETURN		
SHUTTER / AGC	AUTO	HIGH LUMINANCE	MODE	SHUT,AUTO IRIS, SHUT+AUTO IRIS
			BRIGHTNESS	(000 ~ 255)
		LOW LUMINANCE	MODE	AGC, OFF
			BRIGHTNESS	x0.25,x0.50,x0.75,x1.00
		RETURN		
	MANUAL	MODE	SHUT+AGC	
			1/50(PAL),1/100(NTSC)	
		SHUTTER	1/60(NTSC),1/120(PAL)	
			1/250,1/500,1/1000	
		AGC	1/2000,1/4000,1/10000	
		RETURN	6,12,18,24,30,36,42,44,8	
WHITE BAL	ATW	SPEED	(000 ~ 255)	
		DELAY CNT	(000 ~ 255)	
		ATW FRAME	x0.50,x1.00,x1.50,x2.00	
		ENVIRONMENT	INDOOR,OUTDOOR	
		RETURN		
	PUSH			
	USER1	B-GAIN	(000 ~ 255)	
		R-GAIN	(000 ~ 255)	
		RETURN		
	USER2	B-GAIN	(000 ~ 255)	
		R-GAIN	(000 ~ 255)	
		RETURN		
	ANTI CR			
	MANUAL	LEVEL	24 ~ 103	
		RETURN		
	PUSH LOCK			
BACK LIGHT	OFF,BLC,HLC			
PIC ADJUST	MIRROR	OFF,ON		
	BRIGHTNESS	(000 ~ 255)		
	CONTRAST	(000 ~ 255)		
	SHARPNESS	(000 ~ 255)		
	HUE	(000 ~ 255)		
	GAIN	(000 ~ 255)		
	RETURN			
ATR	ON	LUMINANCE	LOW,MID,HIGH	
		CONTRAST	LOW,MIDLLOW,MID,MIDHIGH,HIGH	
		RETURN		
	OFF			

*SHUT+IRIS: Both the Shutter and the Mechanical Iris are automatically adjusted according to brightness.

*Auto Iris(Default): The Shutter stays at the manually selected value and only the Mechanical Iris adjusts to brightness.

10. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
MOTION DET	ON	DETECT SENSE	(000 ~ 127)	
		BLOCK DISP	OFF,ON,ENABLE (CONTROLER)	
		MONITOR AREA	ON,OFF	
			1/4, 2/4, 3/4, 4/4	
		AREA SEL	TOP	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			BOTTOM	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			LEFT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
			RIGHT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
		RETURN		
	OFF			
NEXT				
EXIT				
SAVE ALL				
PRIVACY	ON	AREA SEL	1/4, 2/4, 3/4, 4/4	
			TOP	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			BOTTOM	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			LEFT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
			RIGHT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
		COLOR	(1 ~ 8)	
			TRANSP	0.00, 0.50, 0.75, 1.00
			MOSAIC	OFF,ON
			RETURN	
	OFF			
NR	NR MODE	OFF,Y,C,Y/C		
	C LEVEL	(000 ~ 015)		
	Y LEVEL	(000 ~ 015)		
	RETURN			
CAMERA ID	ON	EDIT MODE		
		RETURN		
	OFF			
LANGUAGE	ENGLISH, 日本語, DEUTSCH, FRANCAIS, Русский, PORTUGUÉS, ESPAÑOL, 中文			
CAMERA RESET				
BACK				
EXIT				
SAVE ALL				

***Important Note :**

- Any changes made to the camera settings must be saved prior to exiting the OSD menu.
Else all changes will be discarded.

- By changing the lens option in the OSD from MANUAL to AUTO will automatically change the SHUTTER/AGC setting from AUTO IRIS to SHUT+AUTO IRIS.(Default:AUTO IRIS)